

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



557830

(43) International Publication Date
2 December 2004 (02.12.2004)

PCT

(10) International Publication Number
WO 2004/103619 A2

(51) International Patent Classification⁷: B23B 31/20,
31/26

Colehill, Wimborne, Dorset BH21 2NT (GB). Tempest,
Michael, Clinton [GB/GB]; 8 Scarf Road, Canford Heath,
Poole, Dorset BH17 8QQ (GB).

(21) International Application Number:
PCT/GB2004/002214

(74) Agents: FAULKNER, Thomas, John et al.; fJ Cleveland,
40-43 Chancery Lane, London WC2A 1JQ (GB).

(22) International Filing Date: 24 May 2004 (24.05.2004)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0311852.8 22 May 2003 (22.05.2003) GB

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

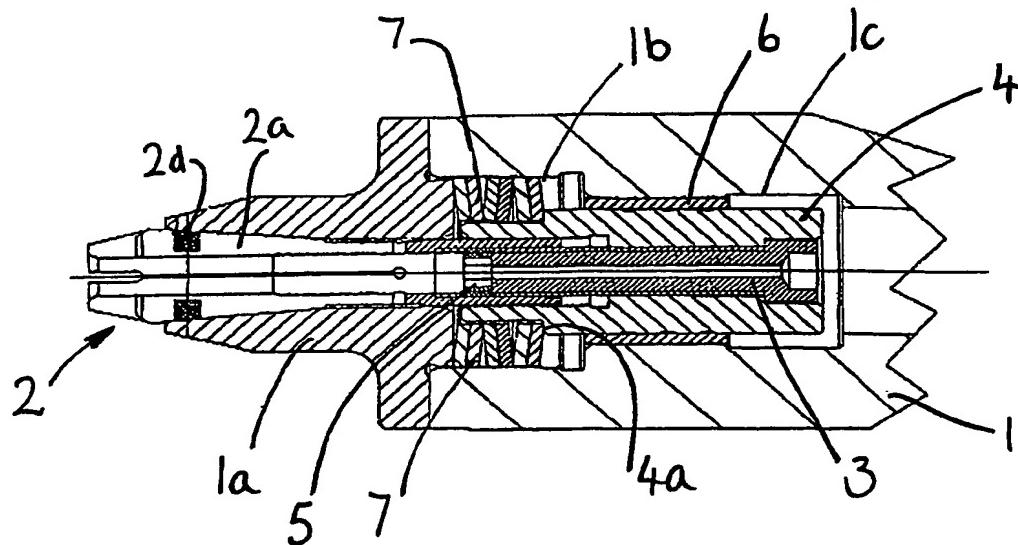
(71) Applicant (for all designated States except US): WEST-WIND AIR BEARINGS LTD [GB/—]; Holton Road, Holton Heath, Poole, Dorset BH16 6KLN (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PAVEY, Christopher, John [GB/GB]; Yew Tree Lodge, 4 OIIVERS Road,

[Continued on next page]

(54) Title: ROTARY TOOL HOLDER ASSEMBLIE



WO 2004/103619 A2

(57) Abstract: A rotary tool holder assembly comprising a collet (2) carried by a shaft (1). The collet (2) is moveable relative to the shaft (1) between a tool gripping position, in which an inserted tool can be gripped for rotation, and a tool release position. In some cases, the shaft (1) comprises a bore, an inner surface of which is shaped for contact with an outer surface of the collet (2). The shaft (1) and collet (2) are shaped such that when the rotary tool holder assembly is rotated at a predetermined high speed the shape of the inner surface of the shaft (1) substantially matches the shape of the outer surface of the collet (2). A friction reducing coating is provided between at least a portion of the inner surface of the shaft (1) and the outer surface of the collet (2). In alternatives, particular parts of the rotary tool holder may have a friction reducing coating.



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Declaration under Rule 4.17:

- *of inventorship (Rule 4.17(iv)) for US only*

Published:

- *without international search report and to be republished
upon receipt of that report*